Communication Systems

CS 401
Summer 2022
Group 7

Emanuel Baca
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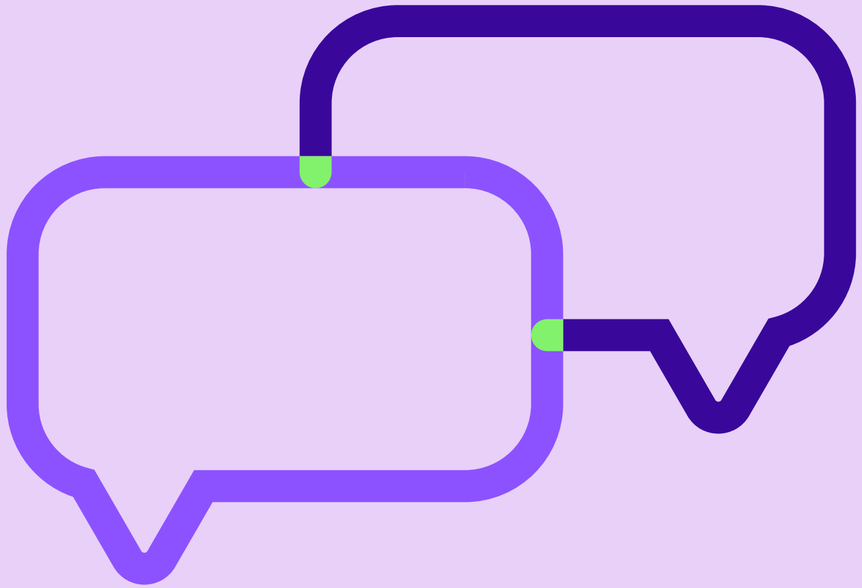
Sandra Torres



1. Description
2. Req Doc
3. Github
4. Design Phase
5. What to look forward to

Project

The Communication System is for a large organization to be run on a Java platform. Only members of the large organization are allowed to use the Communication systems. These members will be called Employees or IT.

Meeting Minutes By Emanuel

WEEK 1 AND 2:

MEETING GROUP MEMBERS AND CREATE GROUP CHAT

WEEK 3 AND 4:

WORK ON REQUIREMENTS DOCUMENT AND START DESIGN PHASE

RECENT WEEK:

GROUP MEETING POSTPONED, WORK ON DESIGN PHASE AND MIDTERM STUDYING

FOLLOWING WEEKS:

MEETING WEEKLY AND START IMPLEMENTING.

Requirements Document (as of last month)

CS 401-01

Summer 2022

Software Engineering

Group 7: Communication Systems

Requirements Document

Authors: Ayumi Toki

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Revision History

Date	Revision	Description	Author
06/21/2022	1.0	Initial Version	Group 7
06/22/2022	1.1	Addition of Meeting Notes	Emanuel Baca

Table of Contents

1. Purpose

1.1 Scope

This document will catalog the users and the system for a Java platform.

1.2 Definitions, Acronyms, Abbreviations

Java = programming language
IT = information technology
UML = Unified Modeling Language

1.3 References

SRS_Template Word document - Assignment 2
UML Use Case Diagrams

1.4 Overview

A communications system for a large organization running on a Java platform.

2. Overall Description

2.1 Product Perspective

2.1.1 Initial Login module for valid credentials

2.1.2 Group chat module

2.1.3 Chat log only module

2.1.4 Search for users module

2.1.5 Log off module

2.2 Product Architecture

2.2.1 The system will be organized into 2 different modules: the Standard Employee module and the IT Administrator module.

2.3 Product Functionality/Features

2.3.1 The high-level features of the system are the following: send messages within employees in organization, messages can be sent synchronously and asynchronously, create a group chat, search for employees in directory, log all chats in a log.txt file, and create new employees.

2.4 Constraints

2.4.1 The application will only work within an organization and is not accessible from any outside source, in other words employees can only message others within their organization.

2.4.2 Valid credentials must be entered in order to launch the application.

2.5 Assumptions and Dependencies

2.5.1 It is assumed that the maximum number of employees is “infinite” therefore the dependency is on the client's physical hardware capabilities.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Common Requirements:

3.1.1.1 Users should be employees of the large organization.

Users should have their id, username, and password.

3.2 External Interface Requirements

3.2.1 The system must provide an interface where users can navigate group chats. The group chats are visible to the users with IT's permission.

The interface should have the employee id, username, and action. Action is for the employee to create a group chat, add a user to the chat, and remove the user.

Chat log and history will be saved in a text file. After new group chats are created or old ones removed, the file will be overwritten with newer updates.

3.3 Internal Interface Requirements

3.3.1 The system must process the chat log where conversations between employees are held. IT has access to all group chats and the chat log history.

4. Non-Functional Requirements

4.1 Security and Privacy Requirements

4.1.1 The User must have valid credentials in order to log into the application.

4.1.2 Only IT Administrators can create new employees and have access to chat logs.

4.2 Environmental Requirements

4.2.1 System must have Java installed in order to use the application.

4.2.2 Server Application must be deployed and running before using Client Application

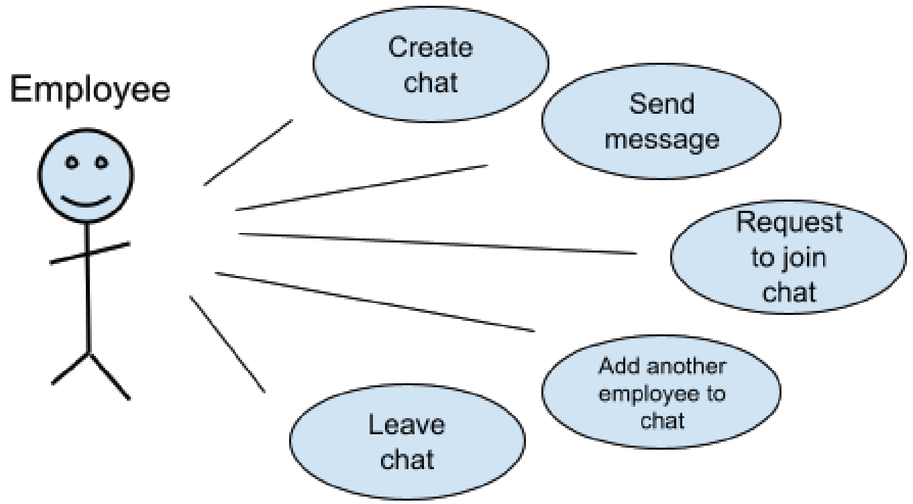
4.2.3 Systems must have a valid IP address in order to communicate via TCP/IP

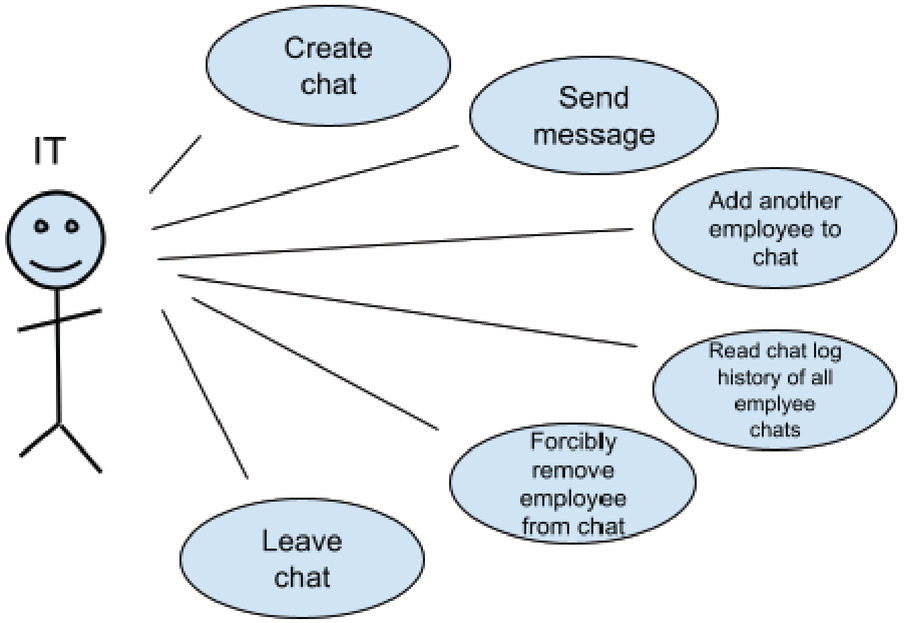
4.3 Performance Requirements

4.3.1 System must be able to have sufficient hard drive space in order to log all chats to a text file where all of the data is stored.

5. UML: Use Case Diagram

5.1 Use Cases





6. Meeting Minutes Log

1st Meeting: 6/8/22 - Requirement Phase

- Requirement List:
- Attendance: Sandra Torres, Ayumi Toki, Son Phil, Emanuel Baca
    - Emanuel Note Taker
    - Talk about Requirements
    - Sandra is typing our Prototype Req List=

Communications Project

Projects will include

- Project documentation

- Java source code

- Junit test suite

- Git source control repository

Brief presentation

Create a communications system for a very large organization.

This system should allow employees to communicate over chat both synchronously and asynchronously.

Users should be able to chat privately and in groups.

All conversations should be logged and viewable by the IT users.

Privacy should be minimized. Only text is required at this time.

This is a Java application with a GUI that operates over TCP/IP.

This system requires a server application and client application.

There is no web or HTML component.

No databases, libraries, frameworks, or other technologies may be used without approval.

Requirements:

Employees, employers, and IT teams are the users of the communication system.

The IT team has access to all chat of employees.

# of users

Only for Java platform

Size is the size of chat, as in the amount of users in a chat. This includes 1-on-1 or group.

There is a maximum and minimum number of users per chat.

Minimum is 2 users.

Maximum is defined by the client.

the user must be an employee or client.

And only IT can add another user.

Access: IT team

action: add users, remove users

actions: action[]

role: action

Roles: role[]

type: voice, chat

Team: user, role[]

User: role, team, id

Users: users[]

size: min, max

- Meeting at 8:00pm on 6/8/22
- Discord Meeting: Nothing to follow up

2nd Meeting 6/13/22 - Requirements Phase (Meeting with Client)

- Meeting with Client
- Attendance: Sandra Torres, Ayumi Toki, Emanuel Baca
    - Time 7:21 pm client meeting 6/13th

    - No client group, just employees
    - Standard Users and IT Users
    - IT Users can read logs, add new users
    - Users interface, look at DVD Collection Gui
    - User properties: Employee ID, First Name, Last Name, Password

3rd Meeting 6/20/22

- Attendance: Sandra Torres, Ayumi Toki, Emanuel Baca
- Assign tasks/roles : Ayumi - Scope (Section 1) , Sandra (Section 3), Emanuel (Section(s) 2, 4)
- Working on Requirements Document Draft and getting a rough draft down

4th Meeting 6/21/22

- Attendance: Sandra Torres, Ayumi Toki, Emanuel Baca
- Follow up on Assigned tasks
- Sandra made a Github Repository called CS401Group7
- Only one question about 2.1 by Emanuel on what to do
- Confirmation that Son was removed from our Discord Group Chat
- No other updates, possible meeting tomorrow 6/22 depending on how class lecture goes

7. Team Schedule & Github Link

7.1 Team Schedule

06/13/2022	After Class FIrst Group Meeting on Discord
06/20/2022	Group Meeting on Assigning Roles for Requirements Document
06/21/2022	Group Meeting on Requirements Document
06/22/2022	Revise the Requirements Document before BlackBoard submission
06/27/2022	Review Documents based on Professor's notes
- 07/01/2022	And Start More on the Design Process. Add content to Github.
07/04/2022 - 07/08/2022	Review Revisions on Requirement Document and Interface Design. Add content to Github.
... 07/29/2022	Continue weekly group meetings after class. Project should be coded by now and we collected feedback from the Professor.

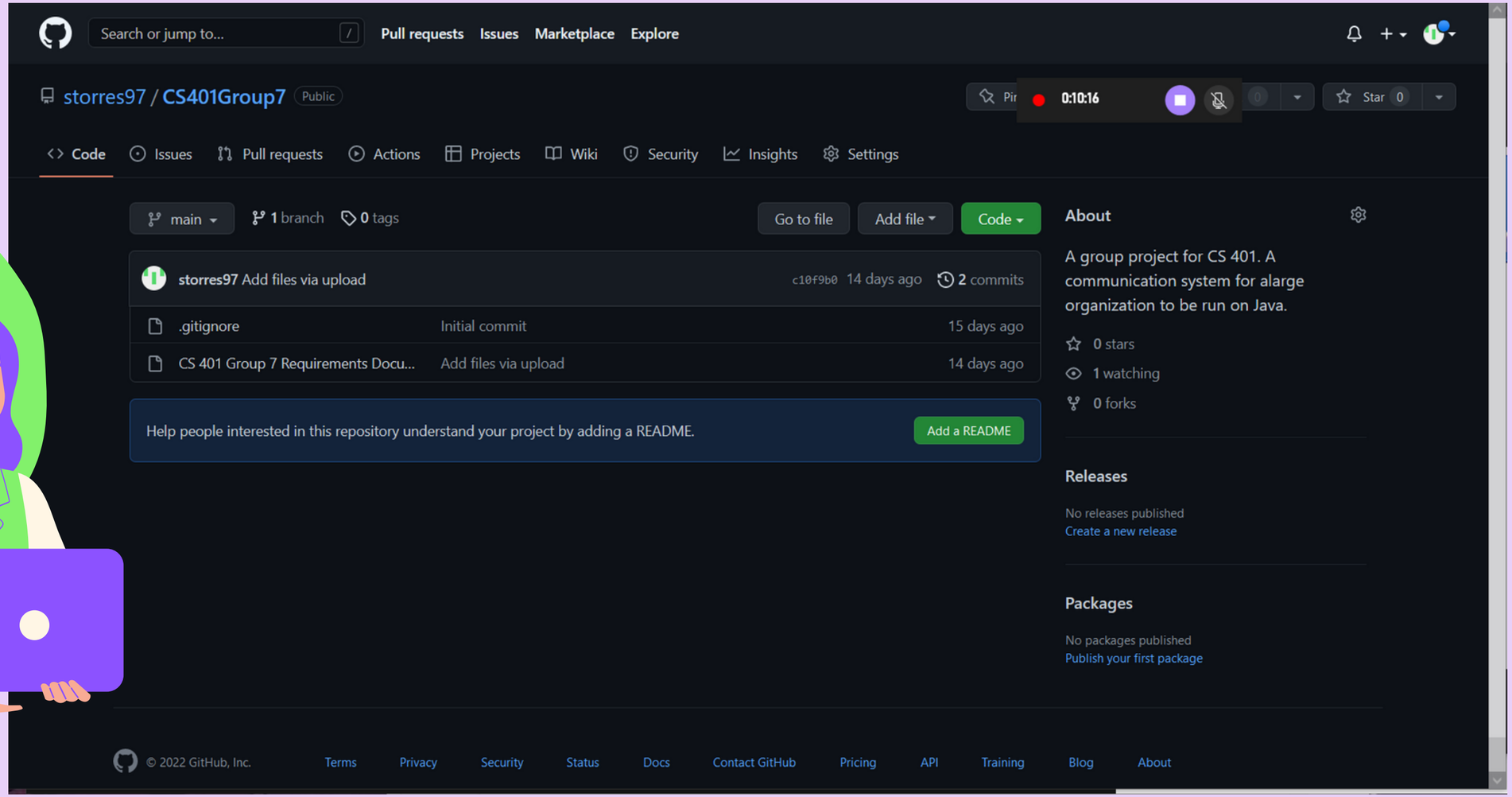
7.2 Github Repository

The following link is the github repository where the Requirements Documents is posted.

`https://github.com/storres97/CS401Group7`

GitHUB Repository:

HTTPS://GITHUB.COM/STORRES97/CS401GROUP7



Design Phase

By Emanuel

Going over class diagrams, brainstorming, and use cases.

Class Diagram

Class Message
properties:
- String from
- String to
- int msgSize
- String data
methods:
- messageType() (Offline or Online)

Class User
properties:
- string firstName
- string lastName
- int empNum
- string password
- string role
- string status
- User users[]
methods:
- sendMessage()
- createGroup()
- findUser()

Class IT extends User
methods:
- createEmployee()
- viewLogs()
- removeEmployee()
- setEmpStatus()

Brain Storming and CRC Cards

Class User
properties:
- First Name
- Last Name
- Employee ID
- Password
- role
- status
- Number of users

methods:
- send message/chat
- create group
- find User

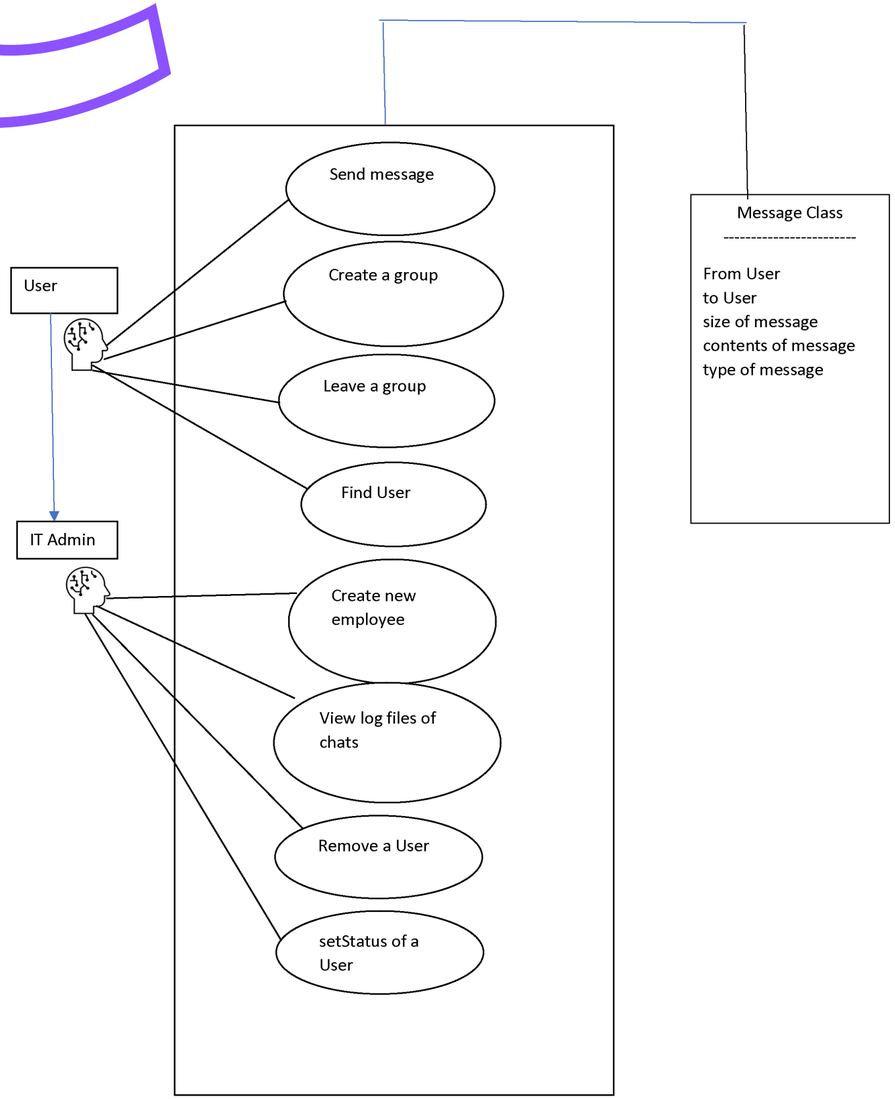
Class IT extends User

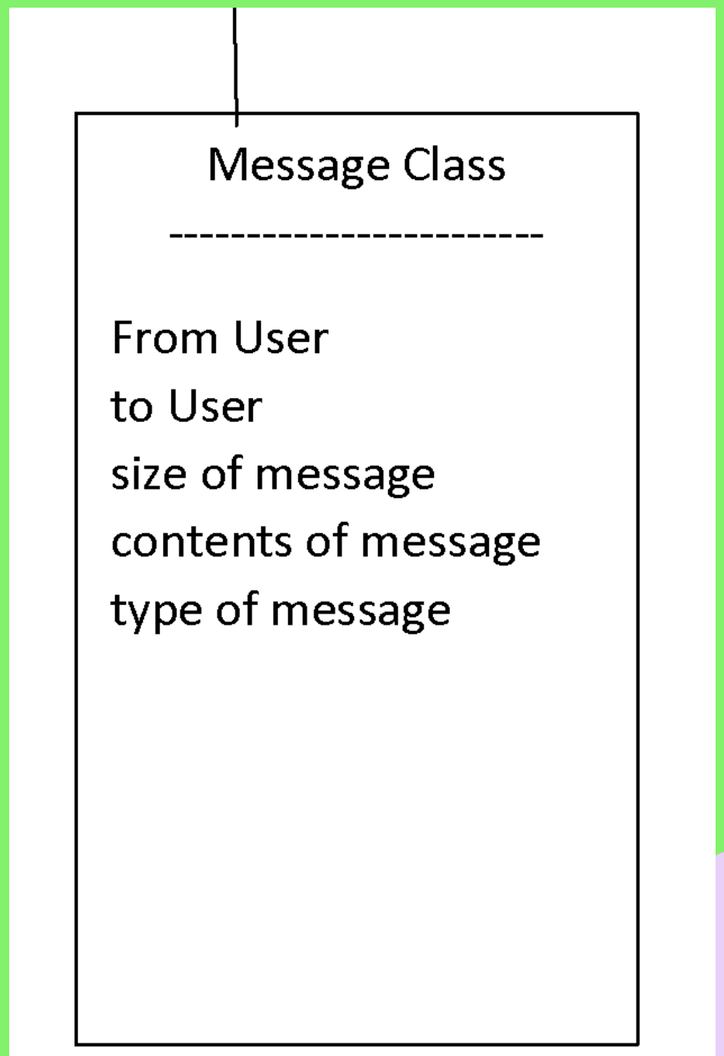
methods:
- Create new Employee
- View log of User
- remove users
- setStatus of User

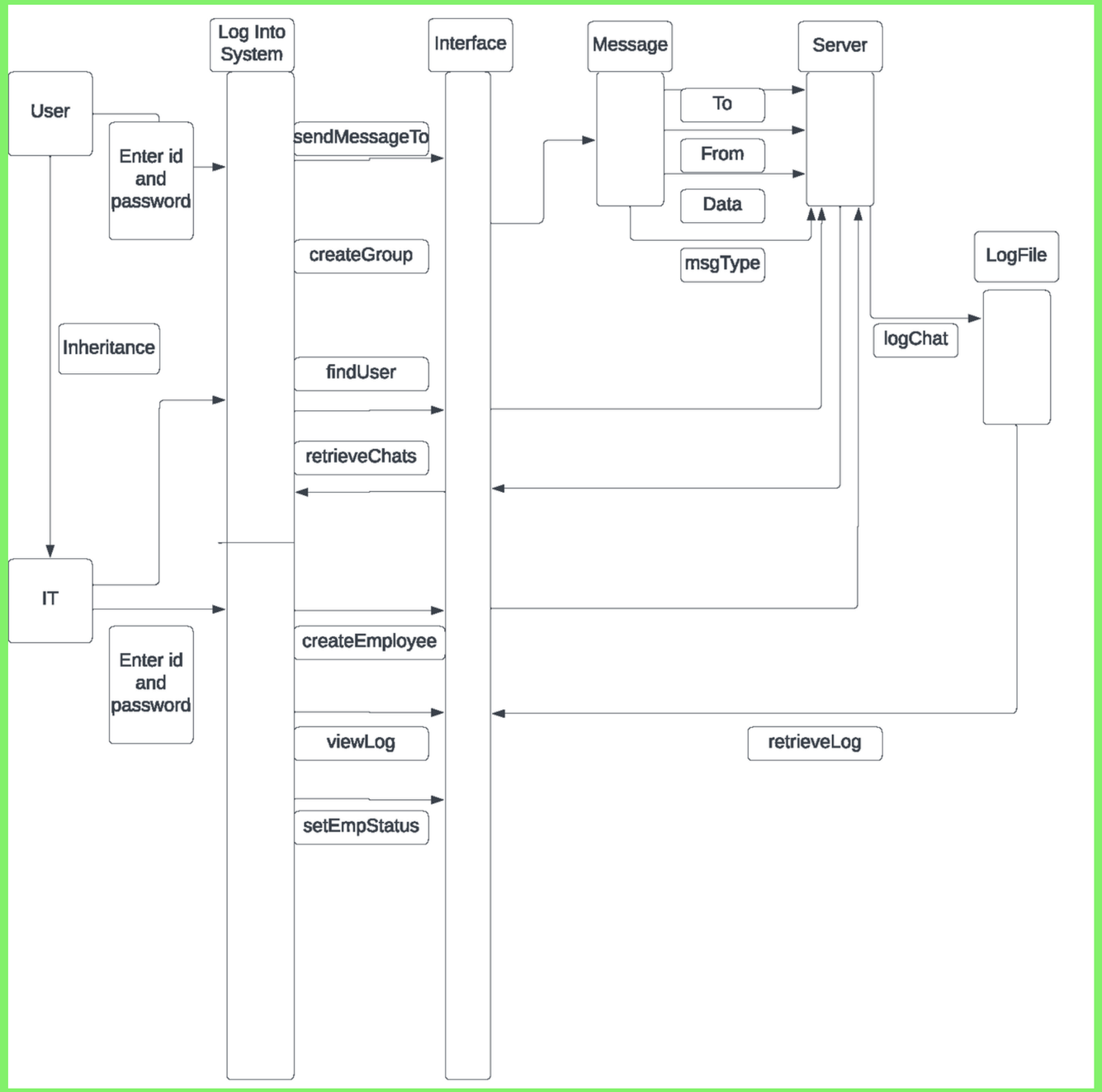
Class Message
properties:
- from
- to
- size of message
- contents of message

methods:
- type of message (Online or offline)

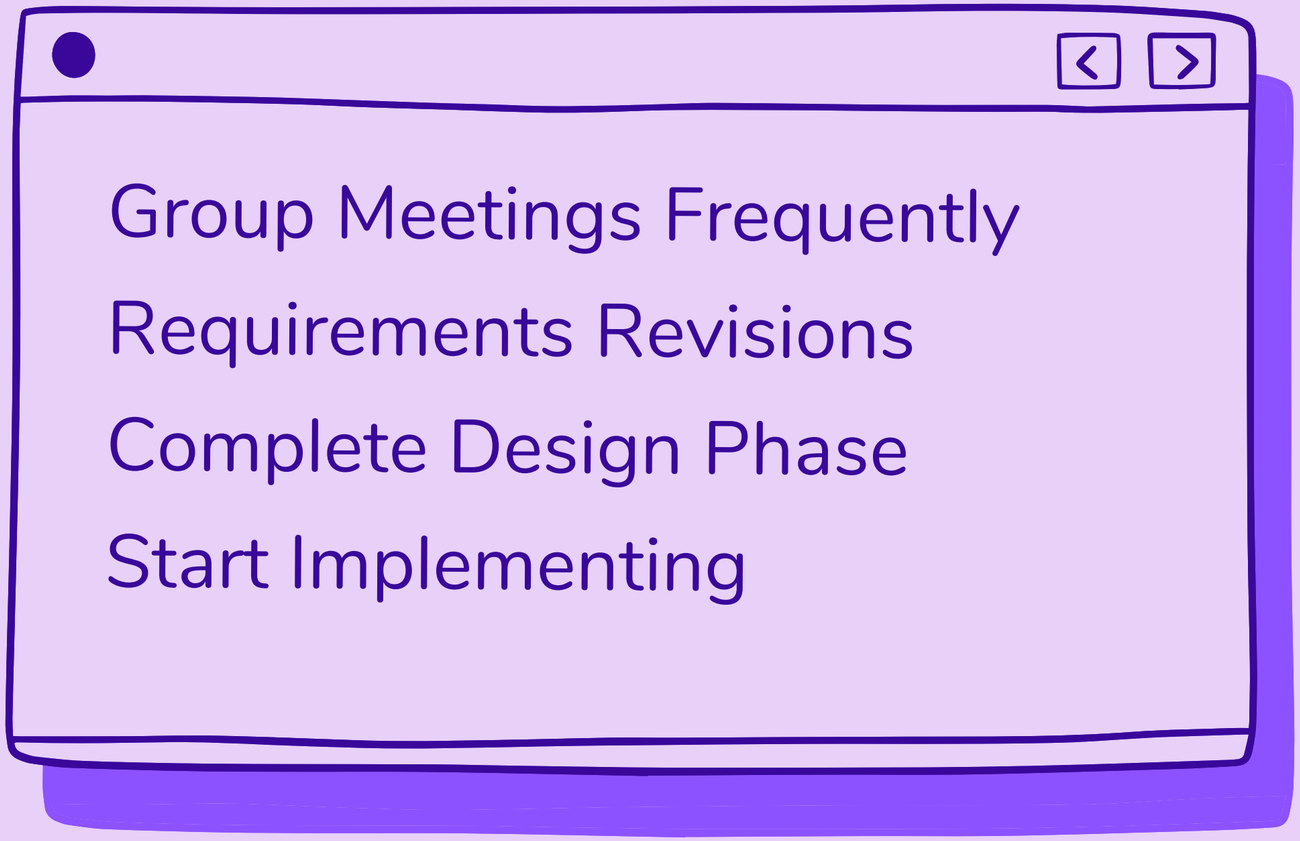
UML Use Case Diagram

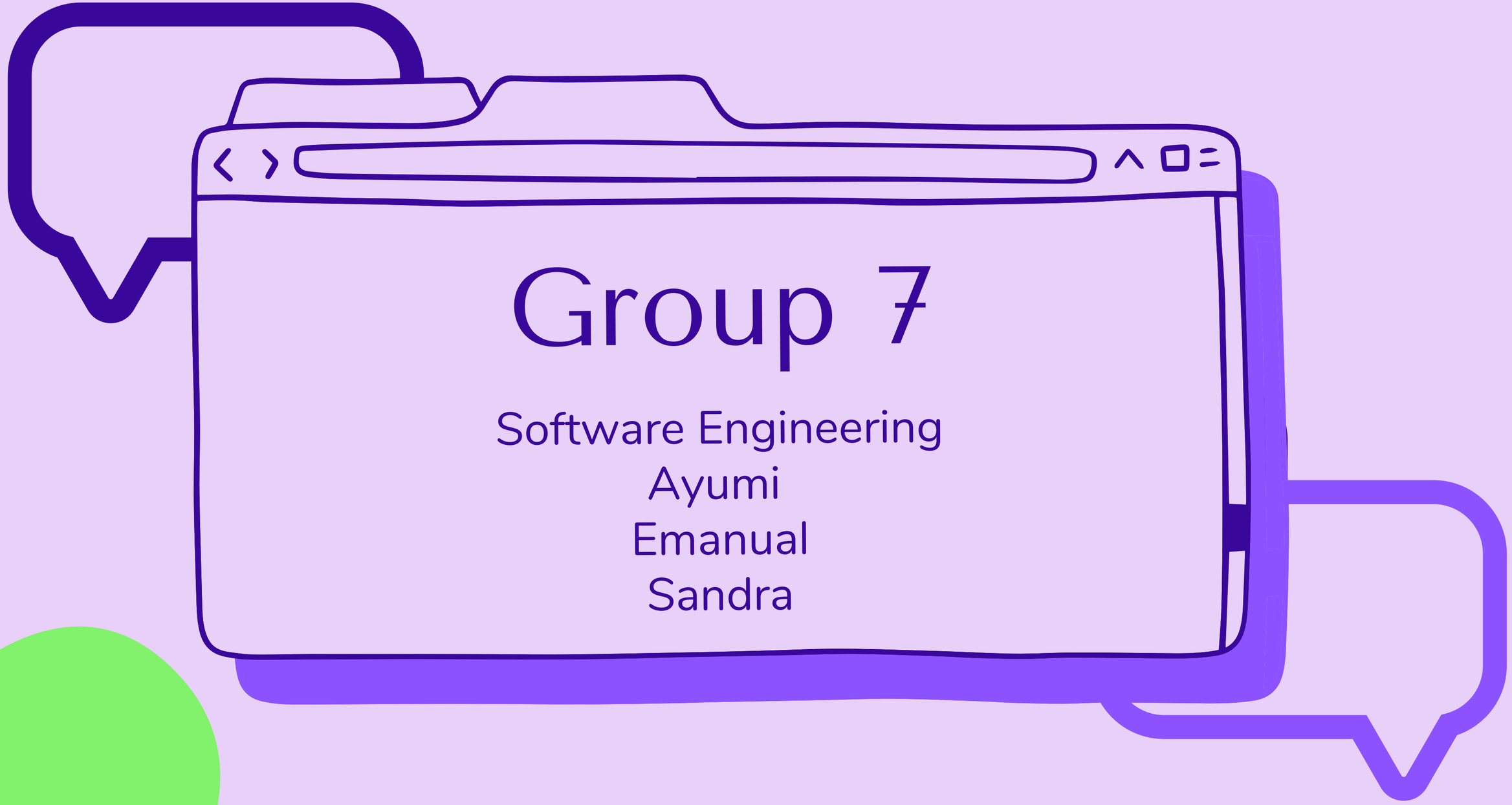





Log Into System
Interface
Message
Server
User
To
sendMessageTo
Enter id and password
From
Data
createGroup
msgType
LogFile
Inheritance
logChat
findUser
retrieveChats
IT
createEmployee
Enter id and password
viewLog
retrieveLog
setEmpStatus

What to look forward to:





Group 7

Software Engineering

Ayumi

Emanual

Sandra